CLAIMS

1. A process of producing a fermentation product in a fermentation medium which process comprises a fermentation step including subjecting liquefied mash to a carbohydrate-source generating enzyme and a fermenting microorganism, wherein the process comprises:

(a) introducing the fermenting organism into the fermentation medium,

(b) adding said carbohydrate generating enzyme after the lag phase of the fermenting organism,

(c) fermenting under conditions suitable for producing the fermentation product.

2. The process of claim 1, wherein the carbohydrate-source generating enzyme is added when the exponential growth phase of the fermenting organism is initiated.

3. The process of claim 1 or 2, wherein said fermenting organism is yeast.

4. The process of any of claims 1-3, wherein the carbohydrate-source generating enzyme is enzyme is glucoamylase or an alpha-amylase, or mixtures thereof, preferably in mixture of acidic fungal alpha-amylase activity (AFAU) per glucoamylase activity (AGU) (AFAU per AGU) of at least 0.1, in particular at least 0.16, such as in the range from 0.12 to 0.50.

5. The process of claim 1, wherein said fermentation product is ethanol.

6. The process of claim 1, wherein said fermentation step is part of a simultaneous saccharification and fermentation process.

7. A process for producing a fermentation product, comprising

(a) milling whole grains;

(b) liquefying the product of step (a);

(c) introducing the fermenting organism into the liquefied product obtained in step (b),

(d) adding the carbohydrate-source generating enzyme after the lag phase of the fermenting organism, and

(e) fermenting under conditions suitable for producing the desired fermentation product.

8. The process of claim 7, wherein the carbohydrate-source generating enzyme is added when the exponential growth phase of the fermenting organism is initiated.

9. The process of claim 7 or 8, further comprising distilling the fermented material.

10. The process of any of claims 7-9, wherein the carbohydrate-source generating enzyme is enzyme is glucoamylase or an alpha-amylase, or mixtures thereof, preferably in mixture of acidic fungal alpha-amylase activity (AFAU) per glucoamylase activity (AGU) (AFAU per AGU) of at least 0.1, in particular at least 0.16, such as in the range from 0.12 to 0.50.

11. The process of any of claims 7-10, wherein said fermenting organism is yeast.

12. The process of any of claims 7-11, wherein the fermentation product is ethanol.